AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A spermine:peptide-based surfactant compound having the general structure of formula (I):

$$R_1$$
 R_2
 R_5
 R_6
 R_6
 R_6
 R_4

(I)

where R₁ and R₃ are hydrogen and R₂ and R₄, which may be the same or different, are peptide groups formed from one or more amino acids linked together, in a linear or branched manner, by amide (CONH) bonds and further linked to the spermine backbone by amide bonds, having the general formula (II):

$$-(A1)_{p1}-(A2)_{p2}-(A3)_{p3}$$

$$|(A4)_{p4}$$
(II)

where p1 is 0 to 5 and p2 is 1 to 5; and the values for p3 and p4, which may be the same or different, are from 0 to 5;

A1, A3 and A4, which may be the same or different, are amino acids selected from the group consisting of serine, lysine, ornithine, threonine, histidine, cysteine, arginine and tyrosine; and A2 is an amino acid selected from the group consisting of lysine, ornithine and histidine; and R₅ and R₆ are saturated or unsaturated hydrocarbyl groups having up to 24 carbon atoms and linked to the spermine backbone by an amide or an amine (NCH₂) linkage;

or

where R_1 and R_3 are hydrogen, R_2 and R_4 , which may be the same or different are saturated or unsaturated hydrocarbyl groups having up to 24 carbon atoms and linked to the spermine

backbone by amide or amine bonds, and R_5 and R_6 , which may be the same or different, are peptide groups of formula (II) linked to the spermine backbone by amide bonds; and

pharmaceutically acceptable salts thereof.

- 2. (Original) A spermine:peptide-based surfactant compound according to claim 1 which is symmetrical, that is R_1 and R_3 are the same, R_2 and R_4 are the same, and R_5 and R_6 are the same.
- 3. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein in the peptide group of formula (II) p1 is 1 and p2, p3 and p4 are all 0.
- 4. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein in the peptide group of formula (II) p1 and p2 are both 1 and p3 and p4 are both 0.
- 5. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein in the peptide group of formula (II) p1 is 0 and p2, p3 and p4 are all 1.
- 6. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein in the peptide group of formula (II) p1 and p3 are 0, p2 is 1 and p4 is 2.
- 7. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein the A1 is serine.
- 8. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein the A2 is lysine.
- 9. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein the hydrocarbyl group is selected from the group consisting of:

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  -(CH_2)_{11}CH_3;
  -(CH<sub>2</sub>)<sub>13</sub>CH<sub>3</sub>;
  -(CH<sub>2</sub>)<sub>15</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>17</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>19</sub>CH<sub>3</sub>;
   -(CH<sub>2</sub>)<sub>23</sub>CH<sub>3</sub>;
  -(CH<sub>2</sub>)<sub>8</sub>CH=CH(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>8</sub>CH=CH(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>;
  -(CH<sub>2</sub>)<sub>8</sub>CH=CHCH<sub>2</sub>CH=CH(CH<sub>2</sub>)<sub>4</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>8</sub>(CH=CHCH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>4</sub>CH=CH(CH<sub>2</sub>CH=CH)<sub>3</sub>(CH<sub>2</sub>)<sub>4</sub>CH<sub>3</sub>;
  --(CH<sub>2</sub>)<sub>8</sub>CH=CH(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub>
   -(CH<sub>2</sub>)<sub>8</sub>CH=CH(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>
                                                                                  Trans; and
   --(CH<sub>2</sub>)<sub>9</sub>CHCH<sub>3</sub>(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>.
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10. (Previously presented) A spermine:peptide-based surfactant compound according to claim 1 wherein the hydrocarbyl group is selected from the group consisting of:

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-CO(CH<sub>2</sub>)<sub>10</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>12</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>14</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>16</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>18</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>22</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>7</sub>CH=CH(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub>;
-CO(CH_2)_7CH=CH(CH_2)_7CH_3;
-CO(CH<sub>2</sub>)<sub>2</sub>CH=CHCH<sub>2</sub>CH=CH(CH<sub>2</sub>)<sub>4</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>7</sub>(CH=CHCH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>3</sub>CH=CH(CH<sub>2</sub>CH=CH)<sub>3</sub>(CH<sub>2</sub>)<sub>4</sub>CH<sub>3</sub>;
-CO(CH<sub>2</sub>)<sub>7</sub>CH=CH(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub> Trans;
-CO(CH<sub>2</sub>)<sub>7</sub>CH=CH(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub> Trans;
-CO(CH<sub>2</sub>)<sub>8</sub>CHCH<sub>3</sub>(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>;
-COCHOH(CH<sub>2</sub>)<sub>21</sub>CH<sub>3</sub>;
-\text{CO}(\text{CH}_2)_9\text{CH}-\text{CH}(\text{CH}_2)_5\text{CH}_3; and
COCH-(CH<sub>2</sub>)<sub>10</sub>CH<sub>3</sub>
           ĊO(CH<sub>2</sub>)<sub>12</sub>CH<sub>3</sub>
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11. (Previously presented) The compound of claim 1 having the formula:

$$\begin{array}{c|c}
O & O & C_{11}H_{23} \\
N & N & N \\
O & C_{11}H_{23} & O \\
\end{array}$$

12. (Previously presented) The compound of claim 1 having the formula:

13. (Previously presented) The compound of claim 1 having the formula:

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$$

14. (Previously presented) The compound of claim 1 having the formula:

Lys-Ser-HN
$$C_{11}H_{23}$$
 NH-Ser-Lys $C_{11}H_{23}$ O

15. (Previously presented) The compound of claim 1 having the formula:

16. (Previously presented) The compound of claim 1 having the formula:

$$\begin{array}{c|c} & & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

17. (Previously presented) The compound of claim 1 having the formula:

18. (Previously presented) The compound of claim 1 having the formula:

19. (Previously presented) A method of introducing DNA or RNA polynucleotides or analogs thereof into a eukaryotic or prokaryotic cell *in vivo* or *in vitro* comprising contacting the cell with the compound of claim 1 and a DNA or RNA polynucleotide or analog thereof.

- 20. (Withdrawn) The method of claim 19 further comprising contacting the cell with one or more supplements selected from the group consisting of:
- (i) a neutral carrier; and
- (ii) a complexing reagent.
- 21. (Withdrawn) The method of claim 20 wherein the neutral carrier is dioleoyl phosphatidylethanolamine (DOPE).
- 22. (Withdrawn) The method of claim 20 wherein the complexing reagent is PLUS reagent.
- 23. (Withdrawn) The method of claim 20 wherein the complexing reagent is a peptide comprising basic amino acids.
- 24. (Withdrawn) The method of claim 23 wherein the peptide consists of basic amino acids.
- 25. (Withdrawn) The method of claim 23 wherein the basic amino acids are selected from lysine and arginine.
- 26. (Withdrawn) The method of claim 23 wherein the peptide is polylysine or polyornithine.
- 27. (Withdrawn) The method of claim 19 wherein the polynucleotides are introduced into a cell to achieve an antisense knock-out effect.
- 28. (Withdrawn) The method of claim 19 wherein the polynucleotides are introduced into a cell for gene therapy.
- 29. (Withdrawn) The method of claim 19 wherein the polynucleotides are introduced into a cell for genetic immunization (for the generation of antibodies) in whole organisms.
- 30. (Withdrawn) The method of claim 19 wherein the polynucleotides are introduced into a cell in culture.

31. (Withdrawn) A method of introducing a polynucleotide or anti-infective compound into a prokaryotic or eukaryotic organism for use in anti-infective therapy, the method comprising contacting the organism with the compound of claim 1 and a polynucleotide or anti-infective compound.

32. (Cancelled).

33. (Amended) A process for preparing spermine:peptide-based surfactant compounds of claim 1 which process comprises adding amino acids or peptides to forming an amide bond between a hydrocarbylated spermine backbone and a peptide comprising one or more amino acids.